

The University of the State of New York
278TH HIGH SCHOOL EXAMINATION
BUSINESS ARITHMETIC
Tuesday, June 18, 1940 — 9.15 a. m. to 12.15 p. m., only

Fill in the following lines:

Name of pupil.....Name of school.....

Instructions

Do not open this sheet until the signal is given.

All parts of the rapid calculation test are to be worked mentally and the results placed on the question paper. At the end of 15 minutes, work must stop and the sheet used for this part of the examination must then be detached from the rest of the question paper and immediately handed to the examiner.

All work must be done with pen and ink.

1-2 a Complete the following record of cash receipts: [5]

	Bills	Specie	Total
Monday	\$ 48	\$135	\$
Tuesday	152	710	
Wednesday	50	79	
Thursday	95	187	
Friday	106	42	
Saturday	753	156	
Total	\$	\$	\$

b Compute the interest: [5]

\$720 for 66 days at 6 % =

\$600 for 72 days at 3 % =

\$240 for 20 days at $4\frac{1}{2}$ % =

\$360 for 3 months at 6 % =

\$480 for 45 days at 6 % =

c Make the extensions: [5]

80 bushels @ \$2.50 =

160 pieces @ $7\frac{1}{2}$ ¢ =

200 pounds @ 18¢ =

$87\frac{1}{2}$ gallons @ 24¢ =

492 articles @ $16\frac{2}{3}$ ¢ =

d Complete each of the following: [5]

80 decreased by $\frac{3}{4}$ of itself is

A tax rate of \$.286 per \$100 is equivalent to \$..... per \$1000.

45.68% expressed as a decimal is

$\frac{3}{8}$ % of \$96 is equal to \$.....

500 lb at 40¢ per cwt is \$.....

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BUSINESS ARITHMETIC

Tuesday, June 18, 1940

- Write at top of first page of answer paper to part II (a) name of school where you have studied, (b) number of weeks and recitations a week in business arithmetic.
The minimum requirement is five recitations a week for a school year.

Answer questions 1-2 and eight of the others. Unless otherwise stated all operations except mental ones are to be shown. Practical business methods must be used in solutions.

1-2 Rapid calculation test on attached sheet. [20]

3 Answer all parts of this question. [10] [Two credits are assigned to each correct answer. Answers only are required in this question.]

- a The freight rate between New York and Chicago on a certain class of merchandise is \$1.25 per 100 pounds. What would be the total freight charges on a shipment of goods of the foregoing class, consisting of 2 barrels weighing 380 pounds each, and 3 cartons weighing 200 pounds each?
- b What will be the amount of the check sent in payment of an invoice amounting to \$660, terms $\frac{3}{10} \frac{1}{20} \frac{n}{30}$, dated April 27, and paid May 15?
- c The employees of a radio factory were paid 60 cents an hour for a 44-hour week. If John Kingsley worked 44 hours in one week, what was the amount of his pay check after deducting 1% social-security tax?
- d A mortgage amounting to \$7800 bears interest at $4\frac{1}{2}\%$, payable quarterly. What would be the amount of interest due each quarter?
- e The tax rate for 1940 in a certain community is \$25.22 per \$1000. If property worth \$3800 is assessed for 80% of its value, find the amount of the tax bill.
- 4 A clothier purchased topcoats for \$24.50 and sold them for \$36. In order to increase his sales, the clothier advertised the topcoats as follows: "Sale of Topcoats — Formerly \$36 — Now \$31.50."
- a What was the per cent of discount offered on the topcoats during the sale? [4]
- b If the clothier sold 12 topcoats a day before the sale, but sold 26 topcoats the day of the sale, what was the amount of the increase or decrease in the daily profit during the sale? [6]
- 5 The meter rate for filtered water in a certain city is 8 cents per 100 cubic feet for the first 20,000 cubic feet, 7 cents per 100 cubic feet for the next 30,000 cubic feet, and 5 cents per 100 cubic feet for all over 50,000 cubic feet. On January 3, 1940, the Western Laboratories received a bill for 58,000 cubic feet of filtered water. If 1% cash discount was allowed for paying the bill on or before February 2, 1940, what was the amount of the check sent in payment of the bill on February 1, 1940? [10]
- 6 Answer both a and b:
- a Personal property valued at \$5000 was insured for 80% of its value at the three-year rate of \$5 per thousand. Find the average yearly cost of the insurance. [4]
- b The Atlas Corporation insured its building valued at \$10,000 in three companies as follows: Star Insurance Company \$4500; Western Indemnity Company \$3500; United Insurance Company \$2000. A fire resulted in a partial loss of \$3600. For how much was each company liable? [6]

7 In 1939 the Zazijian Rug Company determined the selling price of its goods by basing the gross profit of 40% on the cost. In 1940 the company decided to base the 40% gross profit on the selling price.

- a If a rug cost \$66, what was the selling price of the rug in 1939? [2]
- b If the cost of the rug remained the same, what was the selling price of the rug in 1940? [4]
- c By what per cent was the gross profit on the rug increased or decreased in 1940 as compared with 1939? [4]

8 A firm in Boston offers you an invoice of merchandise for \$480, less 20%, 10% and 10%, f. o. b. your city. Another company in Chicago offers similar merchandise at \$500, less 25% and 20%. The freight charges from Chicago to your city are \$18.75.

- a Find a single discount equivalent to the trade discount series offered by the company in Boston. [2]
- b How much is saved by taking advantage of the better offer? [8]

9 Davidson and Lee entered into a partnership, investing \$8000 and \$4000 respectively. At the end of the year the total sales amounted to \$18,525, cost of goods sold was \$12,200 and overhead expenses were \$1522. If the profit was to be divided according to the investment, find each partner's share of the profit. [10]

10 L. W. Webster purchased a house and lot for \$6800, paying \$1800 in cash and giving a $4\frac{1}{2}\%$ mortgage for the remainder. The expenses for the year, in addition to the interest on the mortgage, were as follows: taxes \$128, insurance \$35, repairs \$69, water bill \$15, depreciation \$104, interest lost on the cash invested \$36.

- a What was the annual interest charge on the mortgage? [2]
- b What were the total expenses for the year? [2]
- c If Mr Webster rented the house for \$60 a month, what was his net income for the year? [2]
- d What was the rate of net income on the investment? [4]

11 The cash price of a certain grade of coal purchased during the summer months is \$9.75 a ton. The same grade of coal purchased after October 1 costs \$10.85 a ton. Mr James needed 12 tons of coal. In order to take advantage of the summer price of coal, he borrowed the necessary money on his 90-day note at 6% interest. How much was saved by borrowing the money and purchasing the coal at the reduced price? [10]

12 The Anderson Corporation purchased a new truck for \$980. They estimated the life of the truck would be three years, at the end of which time, the truck would have a trade-in value of \$125. For the first year, the expenses of operating the truck, in addition to the depreciation, were as follows: insurance \$148, repairs \$18, gasoline and oil \$236.20, license plates \$19.

- a What is the annual depreciation of the truck? [2]
- b What was the total cost of operating the truck the first year? [4]
- c If the car was driven 21,400 miles the first year, what was the average cost per truck mile to the nearest tenth of a cent? [4]